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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/662,146

09/12/2003

Jean-Laurent Pradel

FR-AM 1882

8740

31684

7590

09/26/2005

EXAMINER

JACKSON, MONIQUE R

ARKEMA INC.

PATENT DEPARTMENT - 26TH FLOOR

2000 MARKET STREET

PHILADELPHIA, PA 19103-3222

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/662,146

Applicant(s)

PRADEL ET AL.

Examiner

Monique R. Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. The amendment filed 6/28/05 has been entered. Claims 1-9 are pending in the application. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Claim Rejections - 35 USC § 103***

2. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robert et al (USPN 6,528,587) for the reasons generally recited in the prior office action and restated below.

3. Robert et al teach a coextrusion binder composition comprising 5 to 35 parts of a polymer blend (A) which consists of a blend of 80 to 20 parts of a metallocene polyethylene (A1) with a relative density of between 0.865 and 0.915 and of 20 to 80 parts of a non-metallocene LLDPE polyethylene (A2) with a relative density of 0.900 and 0.950, the blend of (A1) and (A2) being cografted by an unsaturated carboxylic acid or derivatives such as maleic anhydride; and 95 to 65 parts of (B) selected from the group consisting of at least one of ethylene homopolymer, ethylene copolymer such as LLDPE and metallocene polyethylene, and a hydrocarbon elastomeric copolymer such as SBS block copolymers; wherein the content of grafted unsaturated carboxylic acid or derivative is between 30 and 100,000 ppm with respect to the blend; and wherein the MFI is between 0.1 and 10 g/10 min (Abstract; Col. 3, lines 7-9; Col. 4, lines 33-51; Claims.) Robert et al further teach that the coextrusion tie composition may be utilized as a tie layer in a structure comprising a polyolefin layer (F), a layer of the tie composition, and either a layer (E) of a nitrogen-containing or oxygen containing polar resin layer such as polyamides, aliphatic polyketones, saponified copolymers of ethylene and vinyl acetate, polyesters, or a metal layer (Col. 5, lines 1-33.) Hence, Robert et al teach all of the

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components of the general tie composition instantly claimed in weight parts that read upon the instantly claimed weight percentages in terms of the grafted polymer blend.

4. With respect to Claim 1, Robert et al do not teach the styrene content of the SBS block copolymer as instantly claimed or that the 65-95 parts B includes an amount of SBS block copolymer that would read upon the instantly claimed 40 to 60wt%. Given the teachings of Robert et al, the component B may be polyethylene such as the instantly claimed polyethylene C or it may also be an elastomer such as SBS block copolymer and considering both polymers are suitable, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any mixture of these two polymers wherein an obvious 50/50 mix would yield an amount of SBS block copolymer that falls within the instantly claimed range.

Alternatively, the 5-35 parts of modified polyethylenes of the blend A of Robert et al may also read upon the broad term "polyethylene" of the instant C component as well as the modified polyethylenes of A of the instant invention and hence would overlap the instant total range of A and C of 30 to 70wt%, with the remainder being the SBS elastomer B as taught by Robert et al.

5. With regards to the content of styrene in the SBS block copolymer, though Robert et al do not teach any specific amount of styrene, given the absence of a clear showing of unexpected results, the Examiner maintains that it would have been obvious to one having ordinary skill in the art to utilize any styrene content, or considering it is well established in the art that the amount of styrene content in a SBS block copolymer is a result-effective variable in terms of the soft/hard block content, it would have been obvious to one having ordinary skill in the art to utilize routine experimentation to determine the optimum amount of styrene to include based on

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the desired hard/soft properties wherein SBS copolymers comprising a styrene content as instantly claimed are common and conventionally utilized in the coextrusion art.

6. With respect to Claim 7, Robert et al teach that the tie composition can be utilized in a multilayer structure comprising a polyolefin layer(F)/tie/layer(E) as defined above but do not . specifically teach that the polyolefin layer (F) is a polystyrene layer, however polystyrene is an obvious species of polyolefin and would have been obvious to one having ordinary skill in the art at the time of the invention wherein one skilled in the art at the time of the invention would have been motivated to determine the optimum amount of each component of the tie composition taught by Robert et al based on the selected layers (F) and (E).

#### ***Response to Arguments***

7. Applicant's arguments with respect to Beuzelin have been fully considered and are persuasive. The rejection of claims 1-9 over Beuzelin has been withdrawn. Applicant's arguments filed 6/28/05 have been fully considered but they are not persuasive with regards to Robert et al. As recited above, Robert et al broadly teach all of the components of the instantly claimed tie composition. The Applicant has argued that the specific selection of the PE (C) and the SBS block copolymer content as well as the specific selection of the styrene content results in a tie composition that is useful for coextruding a multilayer structure comprising a polystyrene layer, however the Applicant has not provided any showing of criticality or unexpected results when these specific amounts are utilized. The fact that the components of a tie composition is modified based on the particular substrates or layers to be adhered is not novel or unexpected in the art and hence the instant invention would have been obvious to one having ordinary skill in the art at the time of the invention based on the teachings of Robert et al.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508.

The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Monique R. Jackson  
Primary Examiner  
Technology Center 1700  
September 19, 2005